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For the Belfast Monthly Magazine.

AT the present period, when the public mind in this country is rather wavering on the subject of vaccination, it may be suitable to publish the following report, extracted from the *Philanthropist*, a London quarterly publication, in which the benefits from this important discovery are fairly appreciated. It is strongly recommended to the perusal of those who continue to have doubts on this subject.

ON THE PROGRESS AND PRESENT
STATE OF THE PRACTICE OF VAC-
CINATION.

THE objects which the general adoption of vaccine inoculation will accomplish for mankind, if time and experience shall confirm the promises of its benevolent discoverer, are so important, that every friend of humanity must have followed, with anxious hope, the progress of the practice, and rejoiced at the general result of the evidence in its favour. It is not easy, indeed, to calculate the sum of human misery that will cease to exist, when the prospect which vaccination holds out to us, shall be realized. In its casual, or *natural* occurrence, as it is termed, the small-pox is not only the most loathsome distemper that visits the human frame, but the most fatal pestilence; sweeping off multitudes, during its prevalence, and destroying the sight, corrupting the habit, or otherwise inflicting disease, on great numbers of those who escape its more destructive effects. The practice of inoculation had, it is true, already diminished those evils, among the individuals who resorted to it; but it had unfortunately augmented the evils, among the people in general, by the perpetual infection which it disseminated, and the ar-

tificial epidemic which it constantly kept up. In London, for instance, during the first thirty years of the eighteenth century, before inoculation could yet have had any effect, the proportionate number of deaths occasioned by small-pox, as stated in the bills of mortality, was about seventy-four out of every thousand: but, during an equal number of years at the end of the century, the number amounted to nearly one-tenth of the whole mortality, or ninety-five out of every thousand. So that, as far as we are able to judge from hence, the practice of inoculation, which in itself might be esteemed one of the greatest improvements ever introduced into the medical art, has actually multiplied the ravages of the disease, which it was intended to ameliorate, in the proportion of above five to four. And the extent of the mischief inflicted on the survivors is manifest, from a statement published by the Society for teaching the Indigent Blind, that nearly one-fourth of the persons admitted into that Charity have been deprived of their sight by the small-pox; not to mention the various forms of scrofula, and other diseases, which it frequently excites.

It is true, that the more intelligent classes of society, who have generally adopted the practice of inoculation, have in a considerable degree avoided the worst of these consequences of small-pox; they have seldom been deprived of the blessing of sight; and they have only been destroyed by the disease in the proportion of about one in three hundred. But the humane will shudder at the recollection, that this exemption has been obtained at the expense of so much additional misery inflicted on the people at large; and that they have but shifted a part of the evils from themselves, to be aggravated in the families of their less enlightened neighbours; while they

perpetuate a plague, which would otherwise have had its periods of absolute cessation.

Such is the condition in which the most improved state of the art of medicine had placed us, before the benefits of vaccination were discovered; and such is the condition, to which some persons would advise us to return, in consequence of the alleged insecurity of this preventive. But it would seem to be only necessary to take a clear and dispassionate view of the state of the facts, relative to the efficacy of the cow-pox, up to the present time, in order to be convinced of its incalculable advantages, even were all the reported failures proved to have occurred,—nay, if they had actually occurred to double the extent that has been represented. It is the purport of this paper to detail, in as brief a manner as possible, the sum of the facts which have recently been brought to light, and to point out the inference, which seems to be justly deducible from them.

The National Vaccine Establishment, supported by parliament, has published two reports during the present year, containing the evidence which they have collected from various authentic sources. The Colleges of Physicians and Surgeons at Edinburgh, and the Faculty of Glasgow, have again given their decided testimony in favour of vaccination. They assert unanimously, that the practice of vaccination is generally approved of by the profession throughout Scotland; that no bad effects can be ascribed to the practice; and that, since its introduction into Scotland, the mortality occasioned by small-pox has very greatly decreased. The Faculty of Physicians and Surgeons of Glasgow further state, that, since the middle of May, 1801, they have gratuitously vaccinated in their hall, 14,500 persons; and that, as far as is known, the

“vaccination in all these has succeeded.”*

The accounts from several public Institutions, in and near London are equally favourable. In the Royal Military Asylum for the children of soldiers, where between eleven and twelve hundred are now received, vaccination has been practised since its first establishment in the year 1803. From that period to the present time, but *one* instance of death from small-pox has occurred; and, it is worthy of remark, that the individual had not been vaccinated, in consequence of a declaration of the mother, that he had passed through the small-pox in his infancy. Vaccination was introduced into the Foundling Hospital in the year 1801, and every infant, soon after its admission, has since that period been vaccinated. From the commencement of this practice to the present time, no death has occurred from small pox, and in no instance has the preventive power of vaccination been discredited, although many children, as a test of its efficacy, have been repeatedly inoculated with the matter of small pox, and exposed to the influence of its contagion. A similar success has at-

* Report from the Vaccine Establishment, 1811.

It appears, that since the last annual Report of the London Vaccine Institution, there have been inoculated by Dr.

Walker.....	2,490
From the commencement of the Institution in 1806.....	8,595
By the appointed Inoculators in the metropolis last year...	1,046
From the beginning.....	3,109
By the appointed Inoculators in the country.....	20,801
From the beginning.....	177,474
Last year, Charges of Matter.....	31,992 to 6,539 Applicants.
From the commencement of the Institution,	93,080 to 18,900 Applicants.

Epitres,

tended the practice of vaccination at the Lying-in Charity of Manchester, where, in the space of nine years, more than nine thousand persons have been effectually vaccinated, and secured from the small-pox. The officers of the Vaccine Establishment in London, through the medium of their correspondence with many similar establishments in the country, have learned, that practitioners of the highest respectability are earnestly engaged in promoting the extension of the practice; that, among the superior classes of the people, vaccination is every where generally adopted; and that, although the prejudices of the lower orders, which have been excited by interested persons, still exist, they appear to be gradually yielding to a conviction of its benefits. This inference is likewise confirmed by the fact, that 23,362 charges of vaccine matter have been distributed by the Establishment to various applicants from all parts of the kingdom, which exceeds by nearly one-third the number distributed in the preceding year.

Of the immense benefits resulting from the universal adoption of vaccination in other countries, the accounts from India have furnished the most interesting example. The number vaccinated in the island of Ceylon, from the year 1802 to January 1810, amounts to no less than 128,732 persons, and, the small-pox has literally been exterminated from the island. From the month of February 1808, to the last mentioned date, the disease had not existed in any part of the island, except in October 1809, when it was carried thither by a boat from the Malabar coast: but, in this instance, the contagion spread to only six individuals, who had not been vaccinated, and was immediately arrested in its progress, and disappeared. The medical Superintendent General observes, that

they have no apprehension that the small-pox will ever spread epidemically in Ceylon, while vaccination continues to be generally practised; at the same time, that its occasional appearance there has the good effect of proving the preservative power of the vaccine pock, and of rousing the natives from their apathy on the subject. Even the Bramins are now surmounting the prejudices of their education, and submitting to be vaccinated.

It appears from a report of the Central Committee of the Vaccine Institution, at Paris, published on the tenth anniversary of its establishment, that the benefits of vaccination, in augmenting the population of a country, have not escaped the attention of the present ruler of France, who has formed dépôts of vaccine fluid in twenty-four of the principal cities, communicating with the Central Committee, at Paris. In some of the departments, it is said, the zeal of the prefects has been such, that there remain none to vaccinate, but the infants born in every year, and that the small-pox is already unknown. And the returns of the mortality in the city of Paris, for the year 1809, exhibit only 213 deaths by small-pox. "This number," say the reporters, "though yet too considerable, since the vaccine offered to these 213 victims a certain method of preservation, is yet extremely small in comparison of that of some years, when the epidemic small-pox has carried off, in the same city, more than 20,000 individuals." The Committee, consisting of sixteen of the principal Physicians of Paris, express their conviction of the efficacy of vaccination in these terms. "Ten years of labour and success have at length decided the important question, as to the vaccine possessing the power of preserving all those, in whom it has regularly gone through its progress, from the small-pox. This has been carried

to such a degree of certainty by the experiments of the Central Committee, and its numerous correspondents, as well Frenchmen as strangers, that there is not at present any fact in medicine better proved, or more certain, than that which establishes the truly *anti-variolus* power of the vaccine."*

Such is the result of the progressive experience of professional men, in regard to the efficacy and preventive powers of vaccination: such is the confirmation, which the inferences, drawn from the early investigation of this subject, have received from subsequent and more extensive research! Insomuch that the conclusion of the College of Physicians upon the subject, in the year 1807, must now be deemed indisputable, that "the truth seems to be established as firmly as the nature of such a question admits."†

The opposition to the practice, which is still but too successfully kept up by a few clamorous individuals in the medical profession, rests principally upon a mistaken view of the nature of the question. It rests upon the notion that the result of the practice should be uniform and invariable—that the *rule* should be void of all *exceptions*. But there is no such regularity in the operations of the animal economy; there is no disease without its anomalies; and the diversity of human constitutions is infinite. Several of these anomalies or exceptions to the general rule, have doubtless occurred in the practice of vaccination; "but," to use the words of a judicious and experienced observer, "certainly not so often as was expected by those, who considered the

subject from the first dispassionately, nor have they been in sufficient number to form any serious objection to the practice founded on Dr. Jenner's discovery."* In truth, if this principle were received, that no operation ought to be performed on the human body which was liable to occasional failure, what medicine would remain for us to exhibit, or what surgical assistance for us to offer?

But let us examine the nature of these exceptions, or "failures," as they have been emphatically called, which have occurred in the practice of vaccination. The very sound of the word excites an alarm, in the minds of many persons, as if *failure* were synonymous with *death*, or implied the certain occurrence of a desperate or mortal small-pox. But this is so far from being the case, that upon a deliberate view of the facts, we do not hesitate to affirm, that, if all the cases of alleged failure, which the opponents of vaccination have raked up, upon any sort of evidence, and often upon none, had really occurred, and that number had been doubled or tripled, its advantages over the inoculation of small-pox would still be incalculable.

In the first place, it has been ascertained by the concurring observations of almost all the practitioners who have attended to the subject, that (to use the words of the College of Physicians) "in almost every case in which the small-pox has succeeded vaccination whether by inoculation, or by casual infection, the disease has varied much from its ordinary course; it has neither been the same in *violence*, nor in the *duration* of its symptoms, but has, with very few exceptions, been *remarkably mild*,

* A copy of this Report may be found in the Edinburgh Medical and Surgical Journal, for January, 1811, p. 117.

† See the Report of the Royal College of Physicians on Vaccination, July, 1807.

* See Dr. Willan's Treatise on Vaccination, page 21.

as if the small pox had been deprived by the previous vaccine disease of its usual malignity.* Dr. Willan states, that the feverishness which precedes the eruption in these cases, is often considerable, but the pustules are small and hard, containing little or no matter, and begin to dry off on the sixth day.† It must not be omitted, indeed, that, in a very few instances, the small-pox, subsequent to vaccination, has assumed the confluent form, and put on a dangerous aspect (as in the recent case of the son of Earl Grosvenor); but even in these rare instances, the modifying influence of the previous vaccination has been manifest, the disease, when near its height, receiving a sudden check, and the recovery being unusually rapid.‡ One case of this sort occurred to the observation of the writer of this paper, in which on the seventh day of confluent small-pox, the child became suddenly free from constitutional complaint, and ran about at play; a circumstance, he believes, that is never known to occur in confluent small-pox, where the previous influence of vaccination had not been exerted. In this statement, then, we have admitted the worst consequences that have ever accompanied the "failures" of vaccination, in any one instance.

But, in the second place, let us attend to the proportionate number of these failures. "It does not appear," says Dr. Willan, who minuted the cases as they happened, "that failures in the preventive effect of vaccine inoculation, including *mistakes*, *negligences*, and *mis-statements*, have occurred in a greater proportion than

as one to eight-hundred."* It is very improbable, then, that the actual failures amount to one in a thousand, or to any thing near that number. But let us suppose, for the sake of argument, that the failures amount to the proportion of one in five hundred; that is to say, that one of every five hundred persons vaccinated, remains liable to be infected by small-pox: and let us further imagine that this subsequent small-pox is not mitigated in any case, and therefore, that (as in the case of the ordinary natural small-pox) one in six of these will die. - Then the worst result would be, that one out of every three thousand persons vaccinated would die. But we know, that one of three hundred persons, who receive the small-pox by inoculation, perishes of that disease.† The conclusion is therefore obvious, that the worst result that could be calculated upon from vaccine failures, would leave the balance in favour of vaccination, in the proportion of ten to one. But, when we consider the actual state of the circumstances;—that the number of deaths from inoculated small-pox really exceeds the number of "failures" of vaccination;—that these "failures" are in a great majority of instances, the means of insuring a very mitigated and harmless small-pox;—and that they have, perhaps, in no instance, been followed by a fatal small-pox;—the chances of fatality from a failure of the vaccination are so trivial, as to elude calculation, and the only chance of injury that ensues, is reduced to that of a temporary inconvenience.

Lastly, let us reflect on the non-

* See the Report of the College.

† See his Treatise, Sect. iv.

‡ See the last Report of the National Vaccine Establishment, July, 1811.

* See his Treatise, page 23.

† Doctor Willan states, that "the inoculated small-pox still proves fatal in one case out of two hundred and fifty."—*Ibid.*

contagious nature of the vaccine disease, which, while it secures the individual from blindness, deformity or fatality, too often consequent on the small-pox, injures no one, and spreads no epidemic around; and we shall be compelled to admit, that "with all its imperfection on its head," with a frequency of failure that its most active opponents have never yet ascribed to it, vaccination would still prove a blessing, such as few individuals have had the happiness to confer upon mankind.

We might here have terminated our observations, but the leading circumstance, communicated in the late Report from the Vaccine National Establishment, demands some notice. It is singular, that at the time when the public attention was attracted by the occurrence of small-pox, after vaccination, in the sons of the Earl of Grosvenor, and Sir Henry Martin, the second occurrence of small-pox in the Rev. Joshua Rowley, Miss Booth, and two other persons, should have happened.* In three of these cases, the previous small-pox had been taken by inoculation, and in the fourth, in the natural way. But the truth is, that the small-pox itself, in whichever of these two ways it is produced, is liable to the same anomalies and exceptions as the cow-pock. There are several examples of the fact on record; one of the most striking of which is the case of Mr. Langford, related in the 4th volume of the *Memoirs of the Medical Society of London*. This person was so "remarkably pitted and seamed," by a former malignant small-pox, "as to attract the notice of all who saw him:" yet he died at the age of fifty in an attack of confluent small-pox, in which he communicated the

infection to five other individuals of the family, one of whom also died. It will be unnecessary here to detail the various examples which authors have described. The writer will just notice an instance which occurred under his own observation, not long ago, the particulars of which will be detailed in the 2d volume of the "*Medico-chirurgical Transactions*," about to be published.* This occurred in a woman of twenty-five years of age, who was considerably pitted by a former confluent small-pox, which she had suffered in her childhood. She caught the second disease, which went through the usual variolous stages in a mild way, by nursing her infant under a confluent small-pox, which proved fatal to it. It is remarkable, that her two elder children, who had been vaccinated a few years before, lived in the same apartment, during the progress of the small-pox in the infant and mother, and escaped the infection; the cow-pock in them having exerted a preventive power, which the previous small-pox had failed to effect in the mother. The poor woman had been prevented, by the terrors excited by the anti-vaccinists, from vaccinating her youngest child: a fact which should induce these opponents of the practice to reflect on the serious responsibility which they assume, in thus discouraging the adoption of this important preventive.

T, BATEMAN, M.D.

Bedford-Row, August 19, 1811.

NATIONAL VACCINE ESTABLISHMENT.

The following Report from the National Vaccine establishment, to

* Several cases, and many references will be there found, which are omitted here for the sake of brevity.

* See the Report of July, 1811.

the Secretary of State, signed by Sir Lucas Pepys, Bart. (President of the College of Physicians, and of the National Vaccine Establishment,) was printed by order of the House of Commons.

TO THE PRINCIPAL SECRETARY OF
STATE FOR THE HOME DEPART-
MENT.

*National Vaccine Establishment,
March, 7th, 1811.*

THE Board of the National Vaccine Establishment have the honour of submitting to your consideration a statement of their proceedings during the year 1810.

They have to report to you that the surgeons of the nine stations, established in London, have vaccinated during the last year 3108 persons, and that 23,362 charges of vaccine lymph have been distributed to various applicants from all parts of the kingdom: being an excess of nearly one-third in the number of persons vaccinated, and in the number of charges of lymph distributed, above that of the preceding year.

They have further to report, that no case of failure has occurred, in any individual vaccinated by the surgeons of the nine stations, since the commencement of this establishment; that the few instances of failure, submitted from other quarters to the investigation of this board in the last year, have been asserted without sufficient proof; that such reports of failure as have been received from the country have been ascertained to rest upon imperfect evidence.

They have great satisfaction in being able to state the favourable result of vaccination in the Royal Military Asylum for the children of soldiers, and in the Foundling Hospital. At the establishment of the former of these charities, in the year 1803, vaccination was introduced,

by order of government; and it continues to be practiced at the present time. During the whole of this period, this institution, which contains more than eleven hundred children, has lost but one of them by small-pox, and that individual had not been vaccinated, in consequence of having been declared by the mother to have passed through the small-pox in infancy. In the latter institution, no death has occurred by small-pox since the introduction of vaccination in the year 1801, from which period every child has been vaccinated on its admission to the charity; and in no instance has the preventive power of vaccination been discredited, although many of the children have been repeatedly inoculated with the matter of small-pox, and been submitted to the influence of its contagion.

They have also the satisfaction of being able to state, that similar success has attended the practice of vaccination at the Lying-in Charity of Manchester, where, in the space of nine years, more than nine thousand persons have been effectually vaccinated; and that, by a report received from Glasgow, it appears, that of fifteen thousand five hundred persons, who have undergone vaccine inoculation in that city, during the last ten years, no individual has been known to have been subsequently affected with small-pox.

It is with a very different feeling that the Board are induced to call your attention to the number of deaths from small-pox, announced in the bills of mortality of the year 1810, amounting to 1,198; which, although great, is considerably less than it had been, previously to the adoption of that practice.

The Board are persuaded that this mortality has arisen from contagion having been propagated by

inoculated persons, of the poorer class, whose prejudice against vaccination are kept alive by false and mischievous hand-bills, denouncing various imaginary and feigned diseases against all those who have undergone vaccination: and the Board have reason to believe that these bills are issued by persons, in several parts of London, who derive emolument from small-pox inoculation.

The Board have been induced, by these considerations, to address the information contained in the preceding paragraphs, to the committees of Charity-schools; and to submit to them the propriety of introducing vaccination into their respective establishments, and among the poor in general.

Besides the duty of superintending the practice of vaccination in London, they have been engaged in an extensive correspondence with several vaccine establishments in the provincial towns; and they acknowledge, with pleasure, the readiness with which many of these bodies have communicated information.

From these sources, they are enabled to state, that the practitioners of the highest respectability in the country have been earnestly engaged in promoting the practice of vaccination by the weight of their authority and example; that in the principal country towns, gratuitous vaccination of the poor is practiced, either at public institutions, or by private practitioners, on an extensive scale: that, among the superior classes of society in the country, vaccination is very generally adopted: that the prejudices of the lower orders, excited against the practice by interested persons, still exist, but appear to be gradually yielding to a conviction of its benefit.

The information received from

Scotland is of a very favourable nature, and it appears, from the reports of the College of Physicians, the College of Surgeons of Edinburgh, and of the Faculty of Physicians and Surgeons of Glasgow, that the practice of vaccination is universal among the higher orders of society; and that, in the opinion of these learned bodies, the mortality from small-pox has decreased, in proportion as vaccination has advanced, in that part of the United Kingdom.

The reports of the Vaccine Establishment, instituted at Dublin, under the patronage of the Lord Lieutenant, state, that vaccination continues to make progress in that city, and in Ireland generally; and that the prejudices against it are subsiding.

The Board have also received very favourable accounts of the progress of vaccination in India: and they have the honour to subjoin a statement, from which it appears, that by vaccination the ravage of small-pox has been repeatedly prevented, and the disorder exterminated in the island of Ceylon.

The Board, guided by the inferences which facts, reported to them from undoubted authority, and actual observations, have furnished, declare their unabated confidence in the preventive power of vaccination, and their satisfaction with the gradual and temperate progress, by which this practice is advancing; that the local and constitutional maladies, which frequently follow the small-pox, rarely (if ever) succeeded to vaccine inoculation; that it produces neither peculiar eruptions nor new disorders of any kind; and that they are of opinion, that by perseverance in the present measures, vaccination will in a few years become generally adopted.